

CLAIMS

What is claimed is:

1. An article comprising:
  - (a) a substrate comprising 99.5–40 weight percent of a polyoxymethylene polymer; 0.5–60 weight percent of at least one non-acetal thermoplastic polymer on or near the surface of the substrate to promote adhesion; and
  - (b) at least one layer adhered to the substrate.
2. The article according to claim 1, wherein the polyoxymethylene polymer is branched or linear.
3. The article according to claim 2, wherein the polyoxymethylene polymer has a number average molecular weight in the range of about 10,000 to about 100,000.
4. The article according to claim 3, wherein the polyoxymethylene polymer has a number average molecular weight in the range of about 25,000 to about 70,000.
5. The article according to claim 1, wherein the substrate comprises about 0.5 to about 20 weight percent of the at least one additional non-acetal polymer.
6. The article according to claim 1, wherein the at least one non-acetal polymer is selected from the group consisting of styrene acrylonitrile copolymers, styrene acrylonitrile copolymers toughened acrylonitrile-butadiene-styrene (ABS) resins, styrene acrylonitrile copolymers toughened with acrylonitrile-ethylene-propylene-styrene resins, polycarbonates, polyamides, polyarylates, polyphenyleneoxides and their blends, polyphenylene ethers and their blends, high impact styrene resins, acrylic polymers, imidized acrylic resins, styrene maleic anhydride copolymers, polysulfones, styrene acrylonitrile maleic anhydride resins, and styrene acrylic copolymers, and derivatives thereof.

7. The article according to claim 6, wherein the at least one non-acetal polymer is selected from the group consisting of styrene acrylonitrile copolymers, acrylonitrile-butadiene-styrene resins, acrylonitrile-ethylene-propylene-styrene resins, and polycarbonates.
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8. The article according to claim 1, wherein the at least one non-acetal polymer is a semi-crystalline polymer selected from the group consisting of polyamides, polyesters and polyolefins.
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9. The article according to claim 1, wherein the at least one layer is co-continuous with the substrate.
10. The article according to claim 1, wherein the at least one layer is discontinuous with the substrate.
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11. The article according to claim 1, wherein the at least one layer is selected from the group consisting of thermoplastic elastomers, thermoplastic olefins, thermoplastic urethanes, polyethylene and polypropylene.
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12. The article according to claim 1, wherein the at least one layer is selected from the group consisting of solvents, water latex, epoxy, urethane, and powder coating acrylic.
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13. The article according to claim 1, wherein the at least one layer is selected from the group consisting of solvent-based glues, latex, epoxy, and super glue.
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14. The article according to claim 1, wherein the substrate is pretreated with a surface modification technique selected from etching, flaming ionization, sanding, surface cleaning, and UV exposure.
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15. A process for making the article of claim 1 comprising the steps of:
- (i) blending a matrix comprising 99.5–40 weight percent of an polyoxymethylene polymer and 0.5–60 weight percent of at least one non-acetal thermoplastic polymer;
  - (ii) molding the matrix into a substrate; and
  - (iii) adhering at least one layer to said substrate.